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09/930,800

08/15/2001

Gordon James Yorke

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PARK, VAUGHAN & FLEMING LLP
508 SECOND STREET
SUITE 201
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EXAMINER

LEROUX, ETIENNE PIERRE

ART UNIT

PAPER NUMBER

2171

DATE MAILED: 11/28/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,800

Applicant(s)

YORKE, GORDON JAMES

Examiner

Etienne P LeRoux

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-12 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat No 5, 903,725 issued to Colyer (hereafter Colyer '725).

Claim 1:

Colyer '725 discloses:

- receiving bi-directional relationship information indicating interrelation between objects having one or more bi-directional relationships [Fig 8 and col 13, lines 19-52];
- creating proxy objects [Fig 8, item 449] based on the bi-directional relationship information for selected bi-directional relationship objects having bi-directional relationships, wherein the proxy objects have knowledge regarding a host object [object server per Fig 8 item 313] to which it belongs and one of [or] more peer objects with which the host relates through a bi-directional relationship;
- receiving a new peer value to be set in a selected object relating to a bi-directional relationship; [col 7, lines 20-35]
- determining, using one or more of the proxy objects, a new peer value to be set for a peer object which has the bi-directional relationship with the selected object; [col 7, lines 20-35]

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- setting the new peer value in a proxy object created for the peer object so that an associated new peer object has a bi-directional relationship with the peer object without a developer of the object model having to ensure all associated references are maintained [alternate pointer to relocated target objects per [col 7, lines 20-35]

Claim 3:

Colyer '725 discloses wherein the bi-directional relationship information receiving step receives the reference value information from a data storage in which data corresponding to the objects is stored [Fig 8 and col 13, lines 19-52]

Claim 4:

Colyer '725 discloses wherein the bi-directional relationship information receiving step receives the reference value information from a new object that is newly created by a user [Fig 8 and col 13, lines 19-52]

Claim 5:

Colyer '725 discloses wherein the bi-directional relationship information receiving step receives the reference value information that includes a collection of reference values for a bi-directional relationship object which references many peer objects [abstract]

Claim 6:

Colyer '725 discloses wherein the proxy object creating step creates proxy objects of unidirectional peer relationships that combined comprise bi-directional relationships [Fig 8 and col 13, lines 19-52].

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Claim 7:

Colyer '725 discloses wherein the proxy object creating step creates a proxy object for each of a pair of one-to-one unidirectional peer relationships that form a one-to-one bi-directional relationship [Fig 8 and col 13, lines 19-52]

Claim 8:

Colyer '725 discloses wherein the proxy object creating step creates a proxy object for each of a one-to-many unidirectional peer relationship and one-to-one unidirectional peer relationships that form a one-to-many bi-directional relationship [Fig 8 and col 13 lines 19-52].

Claim 9:

Colyer '725 discloses wherein the proxy object creating step creates a proxy object for each of uni-directional one-to-many peer relationships that form a many-to-many bi-directional relationship [Fig 8 and col 13, lines 19-52]

Claim 10:

Colyer '725 discloses wherein the new peer value determining step comprises a step of passing the new reference value through related proxy objects that are related to the bi-directional relationship [Fig 8 and col 13, lines 19-52]

Claim 11:

Colyer '725 discloses wherein the new peer value contains a collection of reference values which is determined based on the new reference value [Fig 8 and col 13, lines 19-52].

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Claim 12:

Colyer '725 discloses wherein the new reference value represents addition, removal or change of a reference value [Fig 8 and col 13, lines 19-52]

Claim 14:

Colyer '725 discloses wherein the setting step sets a new peer value by replacing an old reference value with the new peer value [col 7, lines 20-35]

Claim 15:

Colyer '725 discloses determining, using one or more of the proxy objects, another new peer value to be set in a new peer object which is referenced by the new reference value set for the selected object; and setting another new peer value to a proxy object created for the new peer object [col 7, lines 20-35].

Claim 16:

Colyer '725 discloses determining, using one or more of the proxy objects, an updating reference value for a related object that is related to the selected object through one or more original or new bi-directional relationships; and setting the updating reference value in a proxy object created for the related object [col 7, lines 20-35].

Claim 17:

Colyer '725 discloses wherein the updating reference value determining step and the updating reference value setting step are repeated for all related objects so as to maintain bi-directional relationship integrity [Fig 8 and col 13, lines 19-52].

Claim 18:

Colyer '725 discloses wherein the updating reference value determining step comprises a step of passing the new reference value through related proxy objects that are created for the related objects [Fig 8 and col 13, lines 19-52].

1. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colyer '725 in view of Pub No US 2003/0056195 issued to Hunt (hereafter Hunt '195).

Claim 2:

Colyer '725 discloses the elements of claim 1 as noted above.

Colyer '725 fails to disclose receiving object model meta-data defining relationships between objects in the object model; and retrieving reference value information that represents reference values indicating current peer objects for the bi-directional relationships.

Hunt '195 discloses receiving object model meta-data defining relationships between objects in the object model; and retrieving reference value information that represents reference values indicating current peer objects for the bi-directional relationships [abstract].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Colyer '725 to include receiving object model meta-data defining relationships between objects in the object model; and retrieving reference value information that represents reference values indicating current peer objects for the bi-directional relationships as taught by Hunt '195.

The ordinarily skilled artisan would have been motivated to modify Colyer '725 for the purpose of providing a method and apparatus for automating generation of object oriented code for an object and thus improving the speed and accuracy of code generation [paragraph 0004]

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colyer '725 in view of US Pat No 5,717,917 issued to Munakata (hereafter Munakata '917)

Claim 13:

Colyer '725 discloses the elements of claim 1 as noted above.

Colyer '725 fails to disclose wherein the setting step sets a value null when the determining step determines to remove the bi-directional relationship.

Munakata '917 discloses wherein the setting step sets a value null when the determining step determines to remove the bi-directional relationship [col 4, lines 29-40.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Colyer '725 to include wherein the setting step sets a value null when the determining step determines to remove the bi-directional relationship as taught by Munakata '917.

The ordinarily skilled artisan would have been motivated to modify Colyer '725 per the above for the purpose of providing a method of controlling information on data links [abstract]

Response to Arguments

Applicant's arguments filed 10/08/03, have been fully considered but they are not persuasive.

Applicant states on page 7 "In contrast, the instant invention discloses creating a proxy object to represent bi-directional; relationships between a host object to which the proxy object belongs and peer objects with which the host object relates with a bi-directional relationship [...]

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A proxy object that represents a bi-directional relationship for a host object is not the same as a proxy object that represents a remote object.”

Examiner is not persuaded. Due to applicant’s amending claim 1, a new art rejection over Colyer ‘725 is made in supra office action. Applicant is referred to the following teaching by Colyer ‘725 in column 7, lines 19-51:

FIG. 8 shows a first embodiment of the invention in which there is a bi-directional link between the server and its clients. When the server restarts after a malfunction, it contacts all of the clients which were connected to it and tells them to refresh their proxy objects. The client application 48, proxy object 449, proxy register object 155 and ORB 50 are described earlier with reference to the client address space 53 in FIG. 4. The server 313, target object 51, name server 317 and ORB 52 are described earlier with reference to the server address space 54 in FIG. 2. Referring to FIG. 8, at step 510, the server 313 informs each of its client applications 48 that it has restarted following a malfunction. In FIGS. 8 and 9 only a single client application 48 is shown for simplicity, but there may in practice be one or more client applications 48. At step 520, the client application 48 requests the proxy register object 155 to refresh all proxy objects 449 for target objects 51 located in the remote server 54. At step 530, the proxy register object 155 requests all of the proxy objects 449 for target objects 51 located in the server 54 to refresh themselves. At step 540 each proxy object 449 contacts the remote name server 317, passing the remote object name 455 as a parameter, asking for an updated memory location of the remote object 51. At step 550, if the object is a persistent object, the name server 317 locates the target object 51 with the name which was passed to it. If the object is not a persistent object, then the name server 317 creates the object. At step 555, the name server 317 returns the new memory location of the remote object 51 to the proxy object 449 located in the client address space 53. At step 560, the proxy object 449 sets the validity flag 459 to false, updates its alternate proxy pointer 457 to point to the newly supplied memory location of the remote object 51.

Examiner maintains that Colyer ‘725 reads on the claim 1 limitation “creating proxy objects based on the bi-directional relationship information for selected bi-directional relationship objects having bi-directional relationships, wherein the proxy objects have knowledge regarding a host object to which it belongs and one or more peer objects with which the host relates through a bi-directional relationship.”

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Etienne LeRoux



November 25, 2003



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